



# International QL Report

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## EDITORIAL

NEWPORT, RHODE ISLAND, USA - THE EDITORIAL STAFF

This issue completes Volume One of IQLR, and we look forward to our second year of publication. You, our subscribers and readers have made IQLR a voice in the International QL Community, for this, we owe you our thanks.

This past year has established or reestablished lines of communications. No longer are NORTH AMERICANS isolated from their counterparts in EUROPE and around the world. We are talking and sharing our experiences, problems, and successes with each other. Within our own countries QL'ers who felt that they were alone, are stepping forward and contributing to the QL community. But most of all, we are using our computers, and rediscovering just how much we really have.

Major developments and improvements in software and hardware, are in the works for this next year. As these items solidify and take shape we will pass along that information.

Work continues on the "INTERNATIONAL COMPUTER GLOSSARY (ICG)"; the word list has been expanded, the format for presentation resolved, and the first six of 42 sections completed. We have received translations for German, Italian, Spanish, English, and Dutch and anticipate at least three more languages. If you are proficient in these or any other language, and would like to help, please don't hesitate to do so. While we are still waiting for several of the lists to be returned, enthusiasm for this project is growing. As you know the purpose for the ICG is to translate computer terms so that they can be used to help in the translation and conversion of the wealth of public domain software written in various languages, (in most cases and especially with utility programs, only the on-screen prompts need to be translated).

The QL SURVIVOR'S SOURCE BOOK 2nd Edition is now in worldwide distribution. Copies of the QLSSB are available from IQLR; the standard version is \$7.95 plus \$3.00 shipping, the deluxe version (laminated covers) is \$12.95 plus \$3.00 shipping. See IQLR issue 5, page 7 for a detailed description.

A major upgrade of the C-68 compiler has been announced. Release 2 has been reorganized and the package now consists of nine disks. We will inform you when we have them available.

In addition to the nine disks of release 2, at least three additional disks are expected. The first, will be a library for interfacing C-68 with Tony Tebby's Pointer Environment. The second, will be a port to QDOS of the RCS Source Control System. The third, will be a port of the ELVIS editor (a clone of the UNIX VI editor). We hope to have these available soon.

Last but not least; we are still waiting for a response from T.F. Services concerning a discount for a group buy of Minerva ROMs.

# INTERNATIONAL QL MEETING

OCKENFELS, GERMANY - FRANZ HERRMANN

On Saturday the 21st of March 1992, the Sinclair QL User Club of Germany will be hosting the "INTERNATIONAL QL MEETING" in the city of Munster-Roxel in northwestern Germany, at the Tilbecker Strasse 24, from 8 am until 10 pm.

This meeting is dedicated entirely to a discussion of current QL/QDOS developments. In addition, there will be private and commercial exhibits, problem solving, tests, and opportunity to meet QL'ers from around the world.

In addition to the major European and UK dealers that will exhibit, several private projects will be on display

A partial list of the many workshops, demonstrations, and discussions includes:

SMS2 - the new QDOS compatible operating system, parts of which are already running on QDOS machines, such as the drivers on the ST/QL and the DEV device on Gold Cards.

MausTausch - live log-on to the MausNet mailbox with the QL. Communications software and system configuration (off-line reading and answering of messages), to minimize telephone charges will be demonstrated.

QDOS future - review and discussion of current projects and future developments.

A New application to create animations - this application exploits the Pointer Environment to the fullest and is an excellent example of advanced SuperBasic programming.

QL Network Experiment - as many QLs as possible will be networked to give users an opportunity to test its qualities and see how a large network behaves.

PD C68 Compilation System - a brief explanation of the package and system requirements, the latest ports of programs with C68 will be reported and shown, and there will be discussions on the future direction of C programming under QDOS.

Fleet Tactical Command - during the meeting, two groups of players will be trying to defeat each other in a giant naval battle with the most difficult and complex game available for the QL.

As you can see, we have something for everyone. Why not make plans to join us. We can offer assistance to anyone wishing to book a room in any of the numerous hotels in the area. Please contact:

FRANK SCHWANITZ  
Goldaper Strasse 9  
W-4400 Muenster 41  
Germany Tel: 2534-2169

Frank will be happy to help you make local arrangements. Oh, yes the admission fee is 5 DM per person, and includes a free welcome drink.  
(Ed. Note: IQLR will be on display at the INTERNATIONAL QL MEETING).

## **BUS EXPANSION AND THE QL**

NEWPORT, RHODE ISLAND, USA - BOB DYL

Almost from the beginning, QL'ers realized the need for bus expansion. A company by the name of QUEST was the first to advertise a bus expansion system that included additional memory, disk drives and an OS-9 type operating environment. I've never seen one in person, but have been told only a small number were sold and the OS-9 operating system was never realized.

The second attempt was by CST (of THOR infamy) and called the "CST Q PLUS 4". This was a well made unit. It had a sloped surface where you placed the QL, and a buffer card was inserted into the QL's expansion slot. The cable attached to the buffer card, then disappeared into the base of the unit. In the back were four separate expansion slots, in which you could mount say, a disk drive interface, a memory expansion card, and maybe even an EPROM programmer all at the same time. The Q PLUS 4 required a second QL power supply in addition to the normal one for the QL

I had one of these units and it was great, as a matter of fact, Doug Dewey of Carrboro, North Carolina still uses it. So, what was the problem? Cost to manufacture and selling price (300 pounds sterling at the time). In today's dollars that price would be about \$540.00 US. Delays in shipping also contributed to its demise.

Later on Sandy PCP of the UK (I had one of these also) and SPEM of Italy both came out with box kits for the QL that contained a bakers rack type of expander that directed the expansion boards back over the QL motherboard. Unfortunately the bus expander could only be used in their boxed set-ups. In their time, these were also quite expensive. SPEM of Italy still offers their kit and I believe the current price is much more reasonable. This kit is not for the NOVICE.

Still later, SCHOEN of the UK, better known for their PS2 type keyboards and interfaces for the QL, marketed a kit that used a flexible ribbon cable for the bus expansion, however this was not buffered and many people experienced problems.

Recently, many QL'ers have started putting their computers into PC type boxes, and a number of dealers including ADMAN SERVICES (Dennis Briggs), began to offer small bus expanders that routed the expansion cards back over the QL motherboard, without unduly extending the address lines. These bus expanders are fairly small, with connectors for one or two expansion cards. None of these are buffered or driven and some people have been successful in using them while others have not.

Jurgen Falkenberg of Germany has just come out with a Bus Expander that is driven and contains five expansion sockets. Unfortunately it can not be used if the Gold or Trump Cards are installed in the expansion slot.

One of the few criticisms of Miracle Systems is that their Trump Cards and Gold Cards take up all the usable ROM that could be used for such things as buffering or driving bus expanders. As a matter of fact they use up all the ROM except that reserved for the ROM

slot. This is where Miracle connects their Hard Disk, others use it for Toolkit II, Speedscreen, etc.

Maybe this problem can be worked out in the near future, then we'll finally have a bus expander properly buffered/driven that will work on all QL's.

## **CONTINUING RUMORS**

From the Italian QL Show held in January, comes information on the Miracle Graphics Card. It will have two NEW modes. The first, will be an enhanced mode 4 with as many as 256 colors and will be usable with standard QL monitors. The second will be a High Resolution mode of 1024 pixels x 768 pixels in four colors. A VGA monitor would be required to take advantage of this new mode.

When asked about a possible release date, Miracle's standard reply is SOON.

Another little bit of information that came to us from the UK by way of Germany is that a QL'er in the UK developed his own 4 Meg expansion board using the 68020 processor. It was seen up and running by many including someone from Miracle Systems. We've been told that only one was produced and that commercialization is not planned.

We'll follow this story; a lot of people here in North America would love to talk with the developer.

## **OOPS !!!**

Issue #5 : in Doug Dewey's article "What Use Is The QL In Education", the program "DBTUTOR" was mentioned. We apologize for not mentioning that this program was written by Bill Cable (a frequent contributor to IQLR), and could be purchased from Bill at:

WOOD & WIND COMPUTING  
RR 2, Box 92  
Cornish, NH 03745  
USA TEL: (603) 675-2218

Sorry, Bill.

## **FLP/RAM LEVEL 2 REPLACEMENT EPROM** NEWPORT, RHODE ISLAND, USA - IQLR EDITORIAL STAFF

Once in a great while, a product comes along that is a MUST, the FLP/RAM Level 2 EPROM Replacement Chip from Jochen Merz of Germany is just such a product.

Designed to replace the EPROM on the Trump Card or the EPROM on the Sandy SuperQboards (versions 1.17 onwards) the Level 2 replacement considerably speeds up disk operations, numerous new commands are added, and real sub-directories. A new manual is provided which gives the details needed to use the new commands and options. If you are using a Trump Card in a backup system to your Gold Card, the sub-directory capability alone is worth the purchase price.



Those of you without Gold Cards, will be able to achieve some of the speed up in disk operations that Gold Card users enjoy, as well as real sub-directories, and additional commands not now available for the Trump Card or Sandy SuperQboards. When ordering your Level 2 Replacement Chip be sure to specify either the Trump Card version, or the Sandy SuperQboard version.

The price for the Level 2 Replacement EPROM including postage to North America is approximately \$30.00 US. Order from:

JOCHEN MERZ SOFTWARE  
Im Stillen Winkel 12  
W-4100 Duisburg 11  
Germany Tel: 0203 501274

Jochen Merz accepts most major credit cards including VISA and MASTERCARD. When calling from North America, dial: 011-49-203-501274.

## **NEWS RELEASE - QL HDD-CARD**

ERSINGEN, GERMANY - JURGEN FALKENBERG

The first reasonably priced HARD DRIVE SYSTEM for the Sinclair QL, the new QL HDD-CARD offers a Hard drive at low cost.

The QL HDD-CARD is an interface board for the QL's expansion port that allows you to connect a standard PC-hard drive controller of either the MFM (controller type OMTI 5520 or WD 1002A-WX1), or RLL hard drive (controller type OMTI 5527, WD 1002-27X or 1002A-27X) to the Sinclair QL. The driver for the new device WIN1\_ is included in the onboard EPROM and is completely independent of the hard drive being used. Any hard drive, even one in excess of 100 MB of storage is supported.

The QL HDD-CARD is supplied alone (219 DM + 30 DM shipping), or can be supplied with a controller, or as a complete system including the interface, controller, hard drive, and power supply. Please call or write for current pricing on all configurations.

COMPUTER TECHNIK (Jurgen Falkenberg)  
Thanweg 36  
W-7539 Ersingen  
Germany Tel: 07231 81058

By its modular character, the JFC hard drive system is optimized for all QL'ers having assembled their QL system in a larger case. For compatibility with all QL systems, the QL HDD-CARD may be adjusted by switches to any possible ROM address in the QL's memory. The addressing is fully described in the supplied manual and may be done by any QL user without an in-depth knowledge of QDOS.

Like all other JFC peripherals, the QL HDD-CARD does not support the suspicious, electrically and mechanically critical through-porting of the expansion port. If more than one peripheral without through-port should be used simultaneously, a bus expander or better our new QL BUS DRIVER with 5 card sockets is required.

For most systems, you should note that the QL HDD-CARD has a width of 125 mm and does not fit directly in the expansion slot of a QL installed in its original case. There is no problem in plugging the HDD-CARD at the through-port of a RAM expansion board or in one of the JFC QL BUS DRIVER sockets.

A special adapter for connecting the HDD-CARD to the ROM-Port for Gold Card users will be available soon.

## DUST COVERS

NEWPORT, RHODE ISLAND, USA - BOB DYLL

Awhile back, IQLR subscriber Kenton Garrett of Lansing, Kansas, USA raved about a company he'd found in Florida that manufactured dust covers for computers and their peripherals. Kenton had them make a few special covers for him, and to his surprise, the prices were quite reasonable. To quote him, "custom covers at standard item pricing".

To make a long story short, Dick Taylor and I decided to give them a try. I purchased a dust cover for my Chicony 5191 keyboard (a stock item) and one for my Panasonic KX-P 1123 printer (not a stock item at the time), Dick purchased their Panasonic KX-P 1124 cover (a stock item). We ordered their top of the line covers, and lo and behold, the price for my custom cover was the same as Dick's stock cover. The quality is super as is their customer service.

I intend to have a couple of custom covers made in addition to the ones I already have. Those of you with expanded memory and disk interfaces, or Trump Cards extending the length of your QL's, now can get a custom made dust cover just for your system (be ready with the measurements you require when calling), and at a reasonable price.

Our European readers can order their custom or stock dust covers, from their plant in Germany. For more information contact:

CompuCover, Inc.  
2104 Lewis Turner Blvd.  
Fort Walton Beach, FL 32548  
USA  
Tel: 1-800-874-6391  
contact: Carolyn Ellis

CompuCover Europe GMBH  
Danziger Str. 5  
W-7844 Neuenberg A. Rhine  
Germany  
Tel: 07631 73021  
contact: Gerd Bruns

Remembering that we ordered the top of the line covers, the keyboard cover cost \$13.95 US, and the printer cover \$18.95 US. Our thanks to Kenton Garrett for putting us on to a good deal.

*(Ed. Note: If you know of a company or service that deserves recognition in IQLR, write us, and we'll share it with the rest of our readers).*

## **NEWS FLASH !!!**

LONDON, ENGLAND

With the recent collapse of Robert Maxwell's publishing empire, and most if not all of its operations scheduled for the auction block, there was real concern for the fate of "QL World".

We are happy to report, that we have been informed, the employee's of MCPC Ltd. have purchased the group publishing "QL World" along with other specialty magazines. As this group was one of the few profitable arms of the Maxwell empire, we are optimistic that the publication of "QL World" will continue.

## **SUBSCRIPTION RENEWAL**

With the delivery of this issue, ALL SUBSCRIPTIONS to IQLR are now due (except for those of you who took advantage of the early renewal discount). The current subscription rates are as follows:

\$14.95 per year in the US  
\$16.95 per year in Canada (US Funds)  
\$28.00 per year the rest of the world (US Funds)

Why not renew today and avoid any disruptions in your delivery of IQLR. Our second year promises to be even better than our first.

We have a limited number of IQLR Volume #1 (issues 1-6) spiral bound with plastic laminated covers. The cost is \$15.95 plus \$3.00 shipping. For those of you who have saved your back issues, we can offer you plastic laminated covers for \$5.95 plus \$2.00 shipping. Both are available from IQLR.

## **HELPFUL HINT**

TIVERTON, RHODE ISLAND, USA - DICK TAYLOR

Unbranded Sony 3.5" diskettes can be purchased in bulk at prices far below the retail price of the disks with Sony's name imprinted on them. When purchasing these unbranded diskettes, if you have any doubts that the disks being supplied are really Sonys, you can verify this by separating the case of one of the diskettes and examining the contents. Under the pad and attached to the inside of the case is a small (approximately 1/2" x 1/2") metal tab that presses the pad against the storage media. All diskettes have this tab, but only Sony uses metal. The rest of the diskette manufacturers use a plastic tab. If you have a bad diskette available, you might want to open it up and verify this.

## **USING POINTERS AND STRUCTURES IN THE C-PROGRAMMING LANGUAGE**

EAST PROVIDENCE, RHODE ISLAND, USA, - WILL HORTON

This article is intended to emphasize the importance of pointers and structures in order to gain a better understanding of the C Programming Language. It is important to have a thorough understanding of this topic since many of the operations in C use these facilities.

After these concepts have been thoroughly discussed examples will be provided as to their relevance to the C68 compiler.

### Part 1. Pointers

One of the most useful features of the C Programming language is the 'pointer'. The flexibility and power derived from this feature of pointers, sets C apart from other programming languages.

As an analogy of what a pointer is let us consider the task of ordering a box of printer paper through our companies purchasing department. In order to do this we would first submit a purchase order to the purchasing department, the purchasing department would in turn place an order with the stationary store for the box of printer paper. This approach of ordering a box of printer paper was an indirect one since we did not order it directly through the stationary store but through our purchasing department. This same concept also applies to pointers, where a pointer will indirectly access the value of a data item. This concept of indirectly accessing data is called "indirection".

Now for an example of a pointer and a demonstration of indirection, take an integer variable called "number", and define it as follows:

```
int number = 100;
```

Now define another variable called "num\_pointer" that will allow us to indirectly access the contents of variable "number".

```
int *num_pointer;
```

The asterisk defines the variable "num\_pointer" to be of type pointer to integer. This will allow "num\_pointer" to indirectly access the value of an integer variable. Now if we want to have "num\_pointer" point to the variable "number", the following declaration is made:

```
num_pointer = &number;
```

The ampersand in front of "number" is known as the "address operator". This allows the pointer "num\_pointer" to point to the variable "number", it does not assign the value of "number" to "num\_pointer". We now have "num\_pointer" pointing to the variable "number", but how do we access the contents of "number" through our pointer? The indirection operator is the answer. Suppose another variable of type int is defined:

```
int c;  
c = *num_pointer;
```

The variable "c" now contains the value pointed to by "num\_pointer", which is 100. The indirection operator "\*" is what allowed the number pointed to by pointer "num\_pointer", to be assigned to the variable "c".

The illustration below shows a conceptual view of what the relationship between the pointer "num\_pointer" and the variable "number" look like in memory. Notice that "num\_pointer" will be the pointer to "number" and "number" holds the constant 100.



num\_pointer

This will point to a number

number

100

The following listing will demonstrate the use of pointers.

```
main()
{
    int number = 100, v;
    int *num_pointer; /* pointer to integer */

    num_pointer = &number; /* pointer points to the value 100 */
    v = *num_pointer; /* assign the contents of pointer to v */

    printf("number = %d, v = %d\n", number, v);
}
```

The output will be : number = 100, v = 100

## Part 2. Structures

The C Programming language provides us with a tool to group elements of the same type into a single logical entity. This tool is known as a structure. Let us begin this discussion by defining three integer variables.

```
int hour = 16, min = 32, sec = 12;
```

All three of these variables are logically related to each other and could be grouped together in a structure. Perhaps a good name for this structure would be "time". Here is how this data would look if it were incorporated into a structure:

```
struct time
{
    int hour;
    int min;
    int sec;
};
```

The "time" structure defined contains three integer members called "hour", "min", "sec". The definition of "time" appears to create a new data type. Just as a variable was defined to be of type int, you can now define a variable to be of type "struct time". To show how the structure is used here is an example:

```

struct time
{
    int hour;
    int min;
    int sec;
};

main()
{
    struct time clock;

    clock.hour = 12;
    clock.min = 37;
    clock.sec = 19;

    printf("The time is: %d:%d:%d\n", clock.hour, clock.min, clock.sec);
}

```

The output will be : The time is: 12:37:19

Notice that we can assign values to each element of "clock" by simply taking clock and putting the "." element name after clock. Once again keep in mind that clock has been defined to be of type "struct time", and this type has three elements associated with it: hour, min, and sec. This example by itself says little about structures, however it does show how more than one variable can be related through a single type. In this case the type was "struct time", and the variable "clock" was defined to be of this type.

### Part 3 Pointers and Structures.

Now that the concept of pointers and structures have been introduced, let us put the both of them together to show you why they are useful to us.

The C programming language only allows its functions to return a single value, by combining pointers with structures we will demonstrate how many values can be accessed through a single function.

To begin, here is how a pointer to a structure is setup. Building from the previous example we can set a pointer to "clock" called "time\_ptr". Remember that "clock" was of type "struct time", and this new pointer "time\_ptr" must also be of "struct time" also.

```

struct time clock;

struct time *time_ptr;

```

Now we can set the pointer to point to "clock" as follows:

```

time_ptr = &clock;

```

Once this assignment has been made we can indirectly access any of the three data items within the "time" structure, i.e. hour, min, sec. Notice once again the address operator "&" that allows us to point to the address of "clock", not its contents.

```
(*time_ptr).hour = 15;
```

The above assignment would change the hour element within the structure "time" from 12 to 15. In order to fully understand the syntax let us dissect the above statement. The parentheses are required since the structure member operator "." has higher precedence than the indirection operator "\*". So if the parentheses are removed we have, \*time\_ptr.hour, which is a pointer to the element of hour within the structure "time". Remember that the indirection operator forces the pointer to take on the value it is pointing to, and in this case it would be "time.hour".

To put these concepts to work for us here is a routine from the C68 Standard C Library that uses pointers to structures to return its values. This routine is called localtime() which computes the date and time into integer values. It is defined in the file time.h. To use this routine proceed as follows:

```
main()
{
    struct tm *localtime();
    struct tm *date;

    int month, day, year;
    int hour, min, sec;
    int day_of_week;
    int Julian_date;
    int daylight_svgs;
    int seconds;

    /* Retrieve the accumulated time in seconds */
    seconds = time();

    /* Compute the time breakdown */
    date = localtime(&seconds);

    month = (*date).tm_mon;
    day = (*date).tm_mday;
    year = (*date).tm_year;

    hour = (*date).tm_hour;
    min = (*date).tm_min;
    sec = (*date).tm_sec;

    day_of_week = (*date).tm_wday;
    Julian_date = (*date).tm_yday;
    daylight_svgs = (*date).tm_isdst;
}
```

The first thing that is declared is that the routine "localtime()" is defined to be of structure type "tm". The library that holds this routine has within it a structure of type "tm", so this structure is already setup for us. Next a pointer to structure is defined called "\*date". This will point to the elements of the structure "tm". Once the routine "localtime()" is called the structure contains updated items which can be accessed as shown above. For an example notice how month is read, the pointer to the structure element "tm\_mon" is setup as, (\*date).tm\_mon. Once again "\*date" is a pointer to the structure, and when it is setup with the correct "." name it can access any of the elements within the structure.

These examples are only a sample of what pointers and structures can do. Other advanced topics would lead to linked lists, binary trees, sorting functions, and a host of other topics. There seems no getting away from pointers especially if you want to use the library functions within a particular C compiler.

## TEXT WIDTH

POUGHKEEPSIE, NEW YORK, USA - STEPHEN OSTRANDER

The following program demonstrates how to set up a procedure for printing text you've written, so that your choice of characters per line will be printed while still looking neat.

```

1000 LET title$ = "Text_Width"
1002 CLS
1004 DEFine PROCedure Text_Width (Text$)
1006 LET space$ = " " : LET LineLength = 30
1008 REMark ... LineLength is changed to suit your needs
1010 FOR n = LineLength TO 1 STEP -1
1012     IF LEN(Text$) < LineLength
1014         EXIT n
1016     END IF
1018     REMark ... looking for a space just before linelength to break line
1019     REMark ... note string slicing
1020     IF Text$(n) = space$
1022         LET CC = n
1024         PRINT Text$(1 TO CC)
1026         LET Text$ = Text$(CC + 1 TO)
1027         GO TO 1010
1028     END IF
1029 NEXT n
1030 END FOR n
1032 PRINT Text$ : REMark ... actually printing what's left of Text$
1034 END DEFine
1036 LET Text$ = "I think that this program may work well if I can get it to work well
enough to work well"
1038 Text_Width(Text$)

```



CARLO DELHEZ  
Emmastraat 3  
4651 BV Steenberghe  
Netherlands

The three emulators are already operational and have been tested with hundreds of existing ZX 81 and Spectrum programs (mostly commercially marketed programs in machine code).

## SUBSCRIPTIONS / ADVERTISEMENTS

IQLR is published by: SeaCoast Services  
15 Kilburn Court  
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We will publish 4 to 6 issues per year, dependent on the amount of material available. We need your HELP to be able to publish 6 issues. The subscription year is based upon our fiscal year ending 30 April. Mid-year subscribers will be sent back issues for the current year.

**ADVERTISING RATES:** \$15.00 per QUARTER PAGE per issue  
\$25.00 per HALF PAGE per issue.  
\$50.00 per FULL PAGE per issue.

**SPECIAL !!!** Purchase advertising for two issues at the stated price, and we will run your ad in a third issue "FREE".

The ADVERTISING DEADLINE FOR THE NEXT ISSUE IS 20 APRIL 1992.

WE ARE WILLING TO RECEIVE COMMERCIAL SOFTWARE and HARDWARE for REVIEW. SUPPLIERS CAN DEPEND ON AN HONEST EVALUATION.

**THE NEXT ISSUE WILL BE OUR FIRST ANIVERSARY GALA ISSUE - DON'T MISS IT !!!**

# C.G.H. SERVICES

Cwm Gwen Hall, Pencader, Dyfed, Cymru, SA39 9HA  
(Tel. 0559 384574) (9am - 5pm)

## **PUBLIC DOMAIN AND SHAREWARE LIBRARY**

**ALL DISKS £2.00 EACH INCLUSIVE OF MEDIA AND P&P**

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ADVENTURE SOLUTIONS DISKS 1-3 (includes The Pawn and Mortville Manor, mainly ST throughout)  
ADVENTURE SOLUTIONS DISK 4 (QL specific)  
ADVENTURE GAMES SOURCE CODE DISK 1 (includes Fantasia, Haunted House, etc)  
ADVENTURE UTILITIES DISK (includes Quill to SuperBasic coverter and demo adventure)  
AUSTRALIAN P.D. DISKS 1 + 2 (includes a wide variety of games, utilities etc)  
COMMUNICATIONS DISK 1 (includes QBOX Bulletin Board system)  
COMMUNICATIONS DISK 2 (includes QL Kermit)  
CONNECTIONS DISK 1 (includes ST - QL screen and file converters)  
DEVICE UTILITIES DISK 1 (includes Archiving, compacting, formatting and Shell programs)  
DILWYN JONES DISK 1 (includes many SuperBasic progs and Wordsearch)  
EDITOR'S DISK 1 (includes QED and MicroEmacs)  
EDUCATIONAL PROGRAMS DISK 1 (includes maths, music and chemistry programs)  
EMMANUEL VERBEECK DISK 1 (includes screen save and print progs, and many more utilities)  
ESOTERICA DISK 1 (includes DIY Pyramid construction prog. Biorythms and Psychology progs)  
FRACTALS DISK 1 (includes large numbers of mandelbrot and other fractal progs)  
FRACTALS DISK 2 (Carl Cronin's mandelbrot prog plus animation screens)  
FRACTALS DISK 3 (Rainer Kowallick's mandelbrot prog as amended to give "Jewel" effect)  
GAMES DISK 1 (includes Starburst, Cavern Frenzy)  
GAMES DISK 2 (includes many arcade type games)  
GAMES DISK 3 (includes QL War)  
GERMAN TO ENGLISH DICTIONARY (multi-tasking)  
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GRAPHIX SCREENS (PIX FORMAT) DISK 1  
GRAPHIX SCREENS (SPECTRUM) DISK 1  
GRAPHIX SCREENS (ST) DISKS 1,2,3,4,5,6,7,8  
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